Please substitute pages 2, and 11 through 16, to correct Trademark requirements. A marked up version of these pages is included.

IN THE CLAIMS:

Please cancel claims 1-13 without prejudice or disclaimer to the subject matter contained therein.

Please add new claims 14-22 as follows:

--14. An IFN-Fc hybrid molecule comprising an interferon molecule joined at one end to one chain of an immunoglobulin Fc fragment without any linker between the interferon and the immunoglobulin Fc fragment, and functional IFN-Fc variants thereof.

15. The hybrid molecule of claim 14, wherein the interferon is interferon-α and is joined at its C-terminal end to the N-terminal end of the immunoglobulin Fc fragment.

16. The hybrid molecule of claim 14, wherein the Fc fragment is a gamma-4 chain Fc fragment, and wherein said fragment does not induce ADCC or activate complement.

17. The hybrid molecule of claim 16, wherein a second interferon molecule is joined at its end to the end of the other immunoglobulin Fc fragment chain, thereby forming a homodimer.

18. The hybrid molecule of claim 14, wherein the interferon molecule is interferon-α2a or interferon-α2b.

19. A composition comprising the hybrid molecules of any of claims 14 to 18 for treatment of tumors.

20. A method of treating a tumor comprising administering to a patient in need of

such treatment the hybrid molecule of any of claims 14 to 18.

21. A method of treating a tumor comprising administering to a patient in need of such treatment the composition of claim 19.

22. The method of claim 20, wherein the tumor size is reduced as a result of such treatment. --

REMARKS

Claims 14-22 are now pending in this application. Applicant has canceled claims 1-13 without prejudice or disclaimer to the subject matter contained therein. Support for new claims 14-22 may be found in the specification as a whole, and specifically in claims 1, 3, 5, 7-8, and 11-13.

In an effort to expedite prosecution, Applicant offers the following comments. In support of the claims, Applicant draws the Examiner's attention to various data presented in the specification. Example II compares IFN-α(16)Fc and IFN-Ala-Fc. IFN-Ala-Fc contains only one amino acid between the two domains. Figure 1 shows that both of these constructs have equivalent activities, demonstrating that the length of the linker between IFN and Fc has no significant affect on the folding and activity of the IFN. This conclusion is further supported by the comparison of IFN-β-Fc variants listed in Table 1, the linker ranging in size from 2 amino acids to 40 amino acids. Figure 2 illustrates the activity of these constructs. Thus, whether the linker is one amino acid, 2 amino acids, or Zero amino acids, the same results for efficacy and function would be expected for the IFN-Fc constructs. Steric hindrance does not appear to be a factor in the activity of these IFN-Fc hybrid molecules.

Moreover, as stated in the specification, IFN-α has already been shown to have therapeutic value in conditions such as hairy cell leukemia, and inflammatory and viral